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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,125	11/12/2003	Jasdeep Sohi	HSTI 0139 PUSP / H 50028	6225
35312 7590 09/14/2007 BROOKS KUSHMAN P.C./ HENKEL CORPORATION 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075-1238			EXAMINER ZHENG, LOIS L	
			ART UNIT 1742	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/706,125	<b>Applicant(s)</b> SOHI ET AL.	
	<b>Examiner</b> Lois Zheng	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 12 and 22-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12 and 22-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Status of Claims*

1. No claim amendments are made in view of applicant's response filed 3 July 2007. Therefore, claims 1-9, 11-12 and 22-30 remain under examination.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 11-12, 22-24, 27-28 and 30 are rejected under 35 U.S.C. 103(a) as unpatentable over Riesop WO 99/24638(i.e. corresponding English equivalent is Riesop US 6,537,387 B1 (Riesop) in view of Murphy US 5,391,234(Murphy).

Riesop teaches a process for applying a temporary protective coating on steel strips coated with zinc or zinc alloys. The temporary protective coating provides temporary corrosion protection for transport and storage purpose until they are coated with a permanent anticorrosive layer(col. 1 lines 8-20). Riesop further teaches that the aqueous(i.e. water) treatment solution used for this temporary protective coating comprises 1-150 g/l of phosphate ions(col. 2 lines 35-37), up to 20g/l of titanium ions, preferably as hexafluorotitanate ions(col. 2 lines 56-57), up to 30 g/l of fluoride ions which may be in the form of hexafluoro anions of titanium(col. 2 lines 62-65), and having a pH of 1.5-3.5 (col. 2 line 39), for a time period of 1-6 seconds(col. 3 lines 38-42).

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Riesop further teaches the drying of the temporary protective coating solution(col. 3 lines 42-47).

Regarding claims 1, 22-24 and 27, Riesop teaches the claimed coating step(a) and the claimed drying step(b). Even though Riesop does not explicitly teach the claimed conversion coating step(d), one of ordinary skill in the art would have found it obvious to have used conversion coating as the permanent anticorrosive coating as taught by Riesop since conversion coating are widely used as an effective method for forming a permanent anticorrosive coating on metal surfaces.

In addition, the concentrations of phosphate ions and fluorometallate(i.e. hexafluorotitaniate ions) overlap the claimed phosphate and fluorometallate ion concentrations. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed phosphate and fluorometallate ion concentration ranges from the disclosed ranges of Riesop would have been obvious to one skilled in the art since Riesop teach the same utilities in its disclosed phosphate and fluorometallate ion concentration ranges. Furthermore, the treatment solution pH and the treatment time duration as taught by Riesop reads on the claimed pH and treatment time duration.

However, Riesop does not teach the claimed step (c) of removing the primary passivating coating from the metal surface.

Murphy teaches applying an alkaline solution to remove or strip existing protective coating from metal surfaces such as aluminum, zinc and their alloys(col. 1 lines 13-18, col. 2 line 32 – col. 3 line 7). Murphy further teaches that removal of the

coating is necessary when there are defects in the coating or there is a desire to change to a different coating(col. 1 lines 20-38).

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the application of an alkaline solution to remove a protective coating on a metal surface as taught by Murphy into the process of Riesop to remove the temporary coating before the permanent protective coating is applied since Murphy teaches that it is necessary to remove existing coating before applying a different coating.

Regarding claim 2, since the phosphate and fluorometallate ion concentrations as taught by Riesop in view of Murphy overlap the claimed phosphate and fluorometallate ion concentrations, the ratio of fluorometallate anions and phosphate ions would also overlap the claimed fluorometallate:phosphate ratio as claimed. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed fluorometallate:phosphate ratio range from the disclosed range of Riesop in view of Murphy would have been obvious to one skilled in the art since Riesop in view of Murphy teach the same utilities in their disclosed fluorometallate:phosphate ratio range.

Regarding claims 3-7, since the phosphate and fluorometallate ion concentrations as taught by Riesop in view of Murphy overlap the claimed phosphate and fluorometallate ion concentrations, the corresponding wt% of phosphate, fluorometallate and water present in the temporary coating solution of Riesop in view of Murphy would have overlapped the claimed wt% of phosphate, fluorometallate and water as claimed. Therefore, a prima facie case of obviousness exists. See MPEP

2144.05. The selection of claimed phosphate, fluorometallate and water wt% ranges from the disclosed ranges of Riesop in view of Murphy would have been obvious to one skilled in the art since Riesop in view of Murphy teach the same utilities in their disclosed phosphate, fluorometallate and water wt% ranges.

Regarding claim 11, Riesop teaches that the temporary coating is used for corrosion protection for storage purposes(col. 1 lines 8-11). Therefore, one of ordinary skill in the art would have found it obvious that the metal surfaces coated by the temporary protective coating of Riesop in view Murphy is stored prior to the removal of the temporary coating layer which prepares the metal surface for a final permanent protective coating.

Regarding claim 12, Riesop in view of Murphy teaches exposing of the temporary coating (i.e. the primary passivating coating as claimed) to an alkaline solution prior to step (d) as claimed.

Regarding claim 28, the coating time period of 1-6 seconds as taught by Riesop in view of Murphy overlaps the claimed coating time period of 0.1-2.0 seconds. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed coating time period from the disclosed range of Riesop in view of Murphy would have been obvious to one of ordinary skill in the art since Riesop in view of Murphy teach the same utilities in their disclosed coating time period.

Regarding claim 30, Riesop further teaches that the coating temperature is in the range of about 20°C to about 40°C(col. 3 lines 31-33), which reads on the claimed 20-66°C.

4. Claims 8-9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riesop in view of Murphy, and further in view of Torok et al. US 4,287,008(Torok).

The teachings of Riesop in view of Murphy are discussed in paragraph 4 above. However, Riesop in view of Murphy do not explicitly teach a metal surface with aluminum, zinc and silicon composition as recited in claims 8-9.

Torok teaches that an aluminum-zinc coating containing 55% Al, balance zinc with about 1.6% Si is an optimum composition for coating steel surfaces(col. 3 lines 24-27).

Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the Al-Zn coating with 55% Al, balance zinc with about 1.5% Si as taught by Torok into the galvanized coating on steel as taught by Riesop in view of Murphy since Torok teaches that the optimum composition for Al-Zn coated steel is 55% Al balance Zn with about 1.6% Si.

In addition, the Al-Zn coating composition as taught by Riesop in view of Murphy and Torok is substantially the same as the claimed Al-Zn coating composition of 55% Al, 43.5% Zn and 1.5% Si. Therefore, one of ordinary skill in the art would have found it obvious that the temporary coating process as taught by Riesop in view of Murphy and Torok can be applied to the claimed galvanic coating surface with the claimed Al-Zn coating composition with expected success. See MPEP 2144.05.

5. Claims 25-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riesop in view of Murphy, and further in view of Lindert et al. US 4,970,264 (Lindert).

The teachings of Riesop in view of Murphy are discussed in paragraph 4 above. However, Riesop in view of Murphy do not explicitly teach the claimed amino-phenolic polymer in their temporary protective coating solution.

Lindert teaches adding amino-phenolic polymer to metal surface treatment solutions to enhance the corrosion resistance and paint adhesion characteristics of the metal surface(col. 1 lines 27-33, abstract). The coating solution may additionally comprise phosphoric acid, hexafluorotitanic acid, hexafluorozirconic acid(col. 5 lines 3-19). Lindert further teaches that that the amino-phenolic polymer is present in the amount of about 0.001% to about 80%(col. 6 lines 17-40).

Regarding claims 25 and 29, it would have been obvious to one of ordinary skill in the art to have incorporated about 0.001% to about 80% of amino-phenolic polymer as taught by Lindert into the temporary protective coating solution of Riesop in view of Murphy in order to enhance the corrosion resistance and paint adhesion characteristics of the metal surface as taught by Lindert. In addition, the amount of amino-phenolic polymer as taught by Riesop in view of Murphy and Lindert overlap the claimed amount of amino-phenolic polymer as recited in claims 25 and 29. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed amino-phenolic polymer concentration range from the disclosed amino-phenolic polymer amount % range of Riesop in view of Murphy and Lindert would have been obvious to one of ordinary skill in the art since Riesop in view of Murphy and Lindert teach the same utilities in their disclosed amino-phenolic polymer amount % range.



Regarding claim 26, since the temporary protective coating solution of Riesop in view of Murphy and Lindert is an aqueous solution and comprises phosphate ions and hexafluorotitanate ions, the claimed acid such as fluorotitanic acid and phosphoric acid would have inherently been present in the temporary protective coating solution of Riesop in view of Murphy and Lindert. In addition, since Riesop in view of Murphy and Lindert teaches a temporary protective coating solution having overlapping component concentrations as claimed anti-corrosive treatment composition, one of ordinary skill in the art would have found it obvious that the ratio of amino-phenolic polymer and acid in the coating solution of Riesop in view of Murphy and Lindert would have also overlap the claimed amino-phenolic polymer to acid ratio. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed amino-phenolic polymer to acid ratio range from the inherently disclosed amino-phenolic polymer to acid ratio range of Riesop in view of Murphy and Lindert would have been obvious to one of ordinary skill in the art since Riesop in view of Murphy and Lindert teach the same utilities in their inherently disclosed amino-phenolic polymer to acid ratio range.

#### ***Response to Arguments***

6. Applicant's arguments filed 3 July 2007 have been considered but are not persuasive.

In the remarks, applicant argues that Riesop does not disclose removing of the corrosion protection layer and Murphy does not teach removing an electrochemically applied temporary coating.

Although Murphy does not explicitly teach removing an electrochemically applied temporary coating of the claimed invention, Murphy does convey the concept of removing an existing coating when coating defect occur or when it is desirable to use a different type of coating. See paragraph 3 above. Therefore, one of ordinary skill in the coating art, including the electrochemically applied temporary coating art, would have found it obvious, in light of the teaching of Murphy, to remove the existing coating of Riesop in preparation for another subsequent coating for the reasons set forth in Murphy.

Applicant' further argues that Torok teaches a hot-dipped coating instead of a galvanic coating as claimed.

The examiner does not find applicant's argument persuasive since a hot-dipped aluminum-zinc coating as taught by Torok comprises the same material (i.e. 55% Al, balance zinc with about 1.6% Si) as claimed, and is a galvanic coating as claimed.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lois Zheng whose telephone number is (571) 272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LLZ

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